ABSTRACT OF THE INVENTION

A cell phone charging circuit of a USB interface. The charging circuit is supplied with a DC power of 5V via the USB interface and split into two, one has a first resister R1 connected to an emitter of a PNP transistor Q1 in series, and the other has two serially connected diodes D1 and D2. The diodes D1 and D2 have a negative thermal coefficient. The negative electrode of the diode D1 is connected to the base of the transistor, the collector of the transistor serves as a charging output terminal, such that the emitter voltage V_{EB} of the transistor Q1 is the same as the voltage V_{D2} of the diode D2. Therefore, the current flowing through the resistor is $V_{D1}/R1$, and the voltage and current limiting function is obtained. When the temperature of the battery increases for charging, the voltage V_{D1} is reduced to decrease the output current, such that temperature compensation is achieved. When the output current decreases as the battery voltage increases, the output voltage is increased as the emitter voltage V_{EC} of the transistor Q1 is reduced. The automatic voltage adjustment is implemented.